



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

**SWA3-3**  
**Job Sheet 195620**



**Part No:** SWA3-3

**Job Qty:** 1 pcs

**Part Name:** Electric Swivel 3,000 lb Safe Work Load (1,360 Kg)



**Part Weight:** 0 lbs

**Status:** New

**Priority:** Medium

**Job Created:** 5/27/19

**Job Tracking No:**

**Due Date:** 6/4/19

**Created By:** Marie Lajeunesse

**Type:** SOLD

**Description:**

**Note:** DWG SWA3-3 Rev 3 IPP Rev A 18.02.13 New issue DP Verify DD

**Ship Via:**

### Bill of Materials

### Job Routing

| Op No | Operation                   | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier     |           | Sign-off |
|-------|-----------------------------|-------|------------|----------|-----------|---------|-------------------------|-----------|----------|
|       |                             |       |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier   | Lead Time |          |
| 100   | External Load - 1           | 1 pcs | 6/4/19     |          | 0.00      | 2.00    | External Load - 1       |           | Michel   |
|       |                             |       |            |          |           |         | External Load - 2       |           |          |
|       |                             |       |            |          |           |         | External Load - 3       |           |          |
| 110   | External Load - 2 - B4B     | 1 pcs | 6/4/19     |          | 0.00      | 2.00    | External Load - 1 - B4B |           | Michel   |
|       |                             |       |            |          |           |         | External Load - 2 - B4B |           |          |
|       |                             |       |            |          |           |         | External Load - 3 - B4B |           |          |
| 120   | QC 5                        | 1 pcs | 6/4/19     |          | 0.00      | 0.00    | QC 5 - 10               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 12               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 17               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 18               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 19               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 22               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 24               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 3                |           |          |
|       |                             |       |            |          |           |         | QC 5 - 43               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 49               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 51               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 58               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 68               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 9                |           |          |
|       |                             |       |            |          |           |         | QC 5 - 50               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 30               |           |          |
|       |                             |       |            |          |           |         | QC 5 - 40               |           |          |
| 130   | Packaging 3-1 - Stock - B4B | 1 pcs | 6/4/19     |          | 0.00      | 0.00    | Packaging 3 - 1 - B4B   |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 2 - B4B   |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 3 - B4B   |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 4 - B4B   |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 5 - B4B   |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 6 - B4B   |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 7 - B4B   |           |          |
|       |                             |       |            |          |           |         | Packaging 3 - 8 - B4B   |           |          |



**Container No:** S184320



**Part:** SWA3-3

**Job No:** 195620

**Serial No/Batch:** S184320

**Revision:** 3

**Inspector:**

**Exp Date:**

**Instructions:**

Date: 05/27/19

DAS 30 9:06

MAY 28 2019

Plex 5/27/19 1:19 PM Dart.lajeunesse.marie

|     |              |       |        |                        |                 |
|-----|--------------|-------|--------|------------------------|-----------------|
|     |              |       |        | Packaging 3 - 9 - B4B  |                 |
|     |              |       |        | Packaging 3 - 10 - B4B |                 |
|     |              |       |        | Packaging 3 - 11 - B4B |                 |
|     |              |       |        | Packaging 3 - 12 - B4B |                 |
|     |              |       |        | Packaging 3 - 13 - B4B |                 |
|     |              |       |        | Packaging 3 - 14 - B4B |                 |
|     |              |       |        | Packaging 3 - 15 - B4B |                 |
|     |              |       |        | Packaging 3 - 16 - B4B |                 |
|     |              |       |        | Packaging 3 - 17 - B4B |                 |
|     |              |       |        | Packaging 3 - 18 - B4B |                 |
|     |              |       |        | Packaging 3 - 19 - B4B |                 |
|     |              |       |        | Packaging 3 - 20 - B4B |                 |
|     |              |       |        | Packaging 3 - 21 - B4B |                 |
|     |              |       |        | Packaging 3 - 22 - B4B |                 |
|     |              |       |        | Packaging 3 - 23 - B4B |                 |
|     |              |       |        | Packaging 3 - 24 - B4B | MAY 28 2019     |
|     |              |       |        | Packaging 3 - 25 - B4B |                 |
|     |              |       |        | Packaging 3 - 26 - B4B |                 |
|     |              |       |        | Packaging 3 - 27 - B4B |                 |
|     |              |       |        | Packaging 3 - 28 - B4B |                 |
|     |              |       |        | Packaging 3 - 29 - B4B |                 |
|     |              |       |        | Packaging 3 - 30 - B4B |                 |
|     |              |       |        | Packaging 3 - 31 - B4B |                 |
|     |              |       |        | Packaging 3 - 32 - B4B |                 |
|     |              |       |        | Packaging 3 - 33 - B4B |                 |
|     |              |       |        | Packaging 3 - 34 - B4B |                 |
|     |              |       |        | Packaging 3 - 35 - B4B |                 |
|     |              |       |        | Packaging 3 - 36 - B4B |                 |
| 135 | DC - 1 - B4B | 1 pcs | 6/4/19 | 0.00 0.00              | DC - 1 - B4B    |
|     |              |       |        |                        | DC - 2 - B4B    |
| 140 | QC 21 - FG   | 1 pcs | 6/4/19 | 0.00 0.00              | QC 21 - FG - 21 |
|     |              |       |        |                        | QC 21 - FG - 70 |
|     |              |       |        |                        | QC 21 - SA - 53 |

Part Op 100 - (Small Fab) -Assemble as per DWG. Sheet 1 \*\*\*All assembly to be done in accordance with SWA3 swivel manual\*\*\*  
 Descriptions: Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG. Laser engrave dart logo as per DWG.

110 - (Small Fab) -Assemble as per DWG. Sheet 1 \*\*\*All assembly to be done in accordance with SWA3 swivel manual\*\*\*  
 Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG. Laser engrave dart logo as per DWG.

120 - (QC5- Inspect part completeness to step on W/O)

130 - (Identify as per dwg & Stock Location: \_\_\_\_\_) Bag and tag

135 - (Document Control) Photocopy blue file OM & OOPM-SWA3A Rev3

140 - (QC21- Final Inspection - Work Order Release)

Lactite ~~Silicone~~ 242 (M138933)

Grease Aeroshell No. 7 (5138964)

Silicone grease (M139008)



## Job BOM

| Part / Item      | Component Name                                                 | Quantity      | Operation                   | Container |
|------------------|----------------------------------------------------------------|---------------|-----------------------------|-----------|
| 188-FPSS-832-1/4 | Set Screw                                                      | 1 Ea (1 ea)   | 100-External Load - 1       | 5165060   |
| 92210A303        | Flat Socket Cap Screw                                          | 4 pcs (4 ea)  | 110-External Load - 2 - B4B | 5083914   |
| EL-PLUG-F        | 3-Prong Female Spade Plug                                      | 1 Ea (1 ea)   | 110-External Load - 2 - B4B | 5175986   |
| EL-PLUG-M        | 3-Prong Male Spade Plug                                        | 1 Ea (1 ea)   | 110-External Load - 2 - B4B | 5175987   |
| EL314-SJTOW      | Long Line Electrical Wire, 14/3 Gauge replace w/t 01004-08-047 | 6 ft (6 ea)   | 110-External Load - 2 - B4B | 5179682   |
| SWA3-100         | Upper End - Swa3 Swivel                                        | 1 pcs (1 ea)  | 110-External Load - 2 - B4B | 5174084   |
| SWA3-200         | Lower End                                                      | 1 pcs (1 ea)  | 110-External Load - 2 - B4B | 5169952   |
| SWA3-300         | Wire Clamp                                                     | 2 pcs (2 ea)  | 110-External Load - 2 - B4B | 5173676   |
| SWA3-400         | Button Head Screw                                              | 2 pcs (2 ea)  | 110-External Load - 2 - B4B | 5176939   |
| SWA3-500B        | Contact Spacer                                                 | 1 pcs (1 ea)  | 110-External Load - 2 - B4B | 5174896   |
| SWA3-600         | O-Ring                                                         | 1 pcs (1 ea)  | 110-External Load - 2 - B4B | 5176842   |
| SWA3-700         | Bearing Balls - 1/4"                                           | 32 Ea (32 ea) | 110-External Load - 2 - B4B | 5179121   |
| SWA6A-1900       | 1/4" Female Spade Connector                                    | 6 Ea (6 ea)   | 110-External Load - 2 - B4B | 5175992   |
| SWA6A-900B       | Rotary Connector - 3 wire                                      | 1 Ea (1 ea)   | 110-External Load - 2 - B4B | 5172449   |

## Job Allocations

| Operation                   | Component Part   | Required | Inventory | Allocated |
|-----------------------------|------------------|----------|-----------|-----------|
| 100-External Load - 1       | 188-FPSS-832-1/4 | 1        | 102       | 0         |
| 110-External Load - 2 - B4B | 92210A303        | 4        | 32        | 0         |
|                             | EL-PLUG-F        | 1        | 17        | 0         |
|                             | EL-PLUG-M        | 1        | 34        | 0         |
|                             | EL314-SJTOW      | 6        | 0         | 0         |
|                             | SWA3-100         | 1        | 18        | 0         |
|                             | SWA3-200         | 1        | 7         | 0         |
|                             | SWA3-300         | 2        | 33        | 0         |
|                             | SWA3-400         | 2        | 32        | 0         |
|                             | SWA3-500B        | 1        | 12        | 0         |
|                             | SWA3-600         | 1        | 29        | 0         |
|                             | SWA3-700         | 32       | 558       | 0         |
|                             | SWA6A-1900       | 6        | 187       | 0         |
|                             | SWA6A-900B       | 1        | 15        | 0         |

## Part Specifications

Specifications could not be found.

Plex 5/27/19 1:19 PM Dart.lajeunesse.marie

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sequence #: _____                                                                                                                 | QTY Affected : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | MRB (QSI042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QC / QA Coordinator    |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column; align-items: flex-start;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |



Electric Swivel

SWA3

Work Order 195620

Customer 15785

Number of Wires 3

Date 2019-5-27

Serial Number S184320

| Number of Cycles | Load (Lbs.) | Action                                             | Pass/Fail |
|------------------|-------------|----------------------------------------------------|-----------|
| 1                | 3,000       | Check for Conductivity against all wires.          | - Pass    |
| 1                | 3,000       | Check all wires for grounding against swivel body. | - Pass    |
| 1                | 1,500       | Check for Conductivity against all wires.          | - Pass    |
| 1                | 1,500       | Check all wires for grounding against swivel body. | - Pass    |
| 1                | 750         | Check for Conductivity against all wires.          | - Pass    |
| 1                | 750         | Check all wires for grounding against swivel body. | - Pass    |
| 1                | 0           | Check for Conductivity against all wires.          | - Pass    |
| 1                | 0           | Check all wires for grounding against swivel body. | - Pass    |

Test Conducted By: Michel Lalonde  
Technician

Signature: Sylvie Pouches  
QC 5 Small FAB / QA

Submit